1. What is the primary purpose of soundings in surveying?
a) To measure distances horizontally
b) To measure distances vertically
c) To capture aerial photographs
d) To compute plotting errors

Answer: b) To measure distances vertically
Explanation: Soundings are used in surveying to measure depths, primarily in bodies of water. They provide vertical measurements, aiding in understanding underwater topography and assisting in construction projects like bridges and docks.

2. Which method of observation involves measuring angles and distances directly from instrument stations to points of interest?
a) Triangulation
b) Trilateration
c) Compass surveying
d) Plane table surveying

Answer: c) Compass surveying
Explanation: Compass surveying involves directly measuring angles and distances from instrument stations using a compass and a tape or chain. It’s commonly used in areas with limited visibility or rough terrain.

3. What is the main purpose of computations in surveying?
a) To estimate surveying costs
b) To determine the location of instrument stations
c) To analyze observational data

d) To design surveying instruments

Answer: c) To analyze observational data
Explanation: Computations in surveying involve processing observational data collected during the survey. This includes calculations to determine distances, angles, elevations, and other geometric properties required for mapping or construction.

4. Which distortion is primarily associated with aerial photography?
a) Tilt distortion
b) Height distortion
c) Scale distortion
d) Bearing distortion

Answer: a) Tilt distortion
Explanation: Tilt distortion occurs in aerial photography due to the tilt of the camera relative to the ground. It causes objects to appear foreshortened or elongated depending on their position in the image.

5. How does trilateration differ from triangulation in surveying?
a) Trilateration measures angles, while triangulation measures distances.
b) Trilateration measures distances, while triangulation measures angles.
c) Trilateration uses satellites, while triangulation uses landmarks.
d) Trilateration is only suitable for underwater surveys, while triangulation is used on land.

Answer: b) Trilateration measures distances, while triangulation measures angles.
Explanation: Trilateration involves measuring distances between three or more known points to determine the position of an unknown point. Triangulation, on the other hand, measures

angles between known points to determine distances or positions of unknown points.

6. Which distortion can occur when using aerial photography and affects the apparent size of objects?
a) Scale distortion
b) Tilt distortion
c) Height distortion
d) Compass distortion

Answer: a) Scale distortion
Explanation: Scale distortion in aerial photography refers to the change in the apparent size of objects in the image compared to their actual size on the ground. It occurs due to variations in elevation and terrain relief.

7. What is the primary purpose of setting out works in surveying?
a) To adjust instrument readings
b) To mark the positions of structures and boundaries on the ground
c) To calibrate surveying equipment
d) To interpret aerial photographs

Answer: b) To mark the positions of structures and boundaries on the ground
Explanation: Setting out works involves transferring design or survey data from paper plans to the actual ground. It ensures that structures, boundaries, or other features are accurately positioned according to the survey plan.

8. In surveying, what is the term for the distortion caused by the Earth’s curvature when measuring long distances?

a) Refraction
b) Curvature
c) Aberration
d) Flexure

Answer: b) Curvature
Explanation: Curvature distortion refers to the deviation from straightness or flatness caused by the Earth's curved surface. It becomes significant over long distances and must be accounted for in surveying measurements.

9. Which surveying method relies on the principle of intersecting lines or angles to determine positions?
a) Trilateration
b) Triangulation
c) Compass surveying
d) Plane table surveying

Answer: b) Triangulation
Explanation: Triangulation is a surveying method that involves measuring angles between known points to determine the distances or positions of other points. It relies on the principle of trigonometry and the use of triangles formed by intersecting lines or angles.

10. What is the primary advantage of aerial photography in surveying?
a) It provides highly accurate distance measurements.
b) It allows for rapid data collection over large areas.
c) It eliminates the need for ground control points.
d) It reduces the effects of scale distortion.

Answer: b) It allows for rapid data collection over large areas.
Explanation: Aerial photography in surveying enables quick and efficient data collection over vast areas, making it especially useful for mapping, environmental monitoring, and land use planning.